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13 **SUPERIOR COURT OF THE STATE OF CALIFORNIA**
14 **FOR THE COUNTY OF ALAMEDA**

15 COORDINATION PROCEEDING
16 SPECIAL TITLE (Rule 3.550)
17 ROUNDUP PRODUCTS CASES

JCCP NO. 4953
ASSIGNED FOR ALL PURPOSES TO
JUDGE WINIFRED SMITH
DEPARTMENT 21

18 THIS DOCUMENT RELATES TO:
19 *Alva Pilliod, et al. v. Monsanto*
20 *Company, et al.*, Case No. RG17862702

**DEFENDANT'S NOTICE OF MOTION AND
MOTION TO EXCLUDE TESTIMONY OF
PLAINTIFFS' SPECIFIC CAUSATION
EXPERTS; MEMORANDUM OF POINTS AND
AUTHORITIES**

21 BY FAX

22 Hearing Date: March 7, 2019
23 Time: 10:00 a.m.
24 Department: 21
Reservation No.: R-2048311

25 PARTY: Defendant MONSANTO COMPANY
26 RESPONDING PARTY: Plaintiff ALBERTA PILLIOD
27 SET NO.: ONE
28

1 **TO EACH PARTY AND THEIR ATTORNEY(S) OF RECORD:**

2 PLEASE TAKE NOTICE that on March 7, 2019, at 10:00 a.m., or as soon thereafter as counsel
3 may be heard, in Department 21 of the above-entitled court, located at 1221 Oak Street, Oakland,
4 California, Defendant Monsanto Company hereby moves this Court pursuant to *Sargon Enterprises, Inc.*
5 *v. University of Southern California*, 288 P.3d 1237 (Cal. 2012), and California Evidence Code §§
6 720(a), 801, 802, and 803 for an order excluding the specific causation opinions of Plaintiffs' experts
7 (Dr. Dennis Weisenburger and Dr. Chadi Nabhan).

8 This Motion is based upon this Notice, the Memorandum of Points and Authorities, the
9 accompanying Declaration of Eugene Brown, the federal MDL court's *Daubert* record (which has been
10 jointly submitted to this Court by Plaintiffs and Defendants), and supporting exhibits and evidence (filed
11 and served herewith), as well as all pleadings and papers on file in this action and upon such other
12 matters as may be presented by Defendant in further briefing and at the time of the hearing.

13 DATED: February 12, 2019

14 Respectfully submitted,

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1 **MEMORANDUM OF POINTS AND AUTHORITIES**

2 Plaintiffs Mr. and Mrs. Pilliod face the demanding task of presenting reliable expert evidence
3 that Roundup specifically caused each of their non-Hodgkin’s lymphoma (“NHL”). The Pilliods offer
4 two experts to address this requirement: Dr. Chadi Nabhan and Dr. Dennis Weisenburger. Both experts
5 profess to employ a “differential diagnosis”—a methodology whereby they purport to “rule in” all of the
6 possible causes of the Pilliods’ NHLs, including Roundup, and then to “rule out” all causes except
7 Roundup. But mere invocation of the phrase “differential diagnosis” does not sanitize what is otherwise
8 an outcome-driven litigation conclusion. *Tamraz v. Lincoln Elec. Co.*, 620 F.3d 665, 674 (6th Cir. 2010)
9 (“[S]imply claiming that an expert used the ‘differential diagnosis’ method is not some incantation that
10 opens the *Daubert* gate.” (citation and quotations omitted)). Both experts fail to consider (and thus do
11 not “rule in”) a range of Plaintiffs’ conditions with statistically significant links to NHL. While ignoring
12 those risk factors, both experts ruled in Roundup, not through a detailed analysis of each individual’s
13 subtype, medical characteristics, and usage, but by opining that each Plaintiff met a minimal threshold of
14 exposure that the proffered experts extracted from a small subset of unadjusted studies.

15 The experts then push aside all other risk factors based upon nothing more than subjective
16 skepticism. The experts rule out the few non-Roundup risk factors they considered with a haphazard
17 analysis that, if applied consistently, would require them to rule out Roundup as well. Finally, the
18 experts provide no reason for their decision to rule out an idiopathic explanation. NHL is a common
19 cancer with no known cause in the vast majority of cases, and given that no test or marker exists to point
20 to Roundup as the cause of the Pilliods’ NHLs, this explanation cannot be so breezily dismissed. The
21 specific causation testimony these experts offer lacks the “intellectual rigor” and coherence required for
22 admission at trial. *See Sargon Enters., Inc. v. Univ. of S. Cal.*, 288 P.3d 1237, 1252 (Cal. 2012).

23 **BACKGROUND**

24 **I. NHL Is a Common Cancer with Over Sixty Subtypes and No Known Cause in Most Cases.**

25 With 75,000 new cases each year, NHL is one of the most common cancers in the United States.
26 Ex. 1, Nabhan *Pilliod* Dep. at 24:23–25:8. The average American’s risk of developing NHL during his
27 or her lifetime is about 1 in 47. *Id.* at 27:9–13. Despite its prevalence, NHL’s causes are generally
28 unknown: In the “vast” majority of cases, doctors do not know the cause of the patient’s NHL. Ex. 2,

1 Nabhan *Adams* Dep. at 68:22–69:2. Dr. Weisenburger estimates that the cause of NHL is unknown in
2 seventy percent of all cases. Ex. 4, Weisenburger *Adams* Dep. at 56:18–57:3, 212:7–14. There are more
3 than sixty different subtypes of NHL, Ex. 1, Nabhan *Pilliod* Dep. at 27:14–28:9, which is significant
4 because each subtype carries different “characteristics and features,” requires different treatment, and,
5 importantly, has different risk factors. Ex. 3, Weisenburger *Pilliod* Dep. at 42:7–12, 119:19–120:9.

6 **II. Mr. and Mrs. Pilliod Have Many Risk Factors Associated with NHL.**

7 The Pilliods have different sub-types of NHL. Mr. Pilliod has diffuse large B-cell lymphoma
8 (DLBCL), a subtype of NHL that accounts for thirty to thirty-five percent of all cases. Ex. 1, Nabhan
9 *Pilliod* Dep. at 28:2–9. Mr. Pilliod was diagnosed in 2011 at the age of sixty-nine. Ex. 6, Nabhan
10 *Pilliod* Rep. at 22. Mrs. Pilliod was diagnosed in 2015, shortly before her seventy-first birthday, with a
11 different subtype of NHL known as primary central nervous system lymphoma (PCNSL), a rare subtype
12 of DLBCL. *Id.* at 5; Ex. 1, Nabhan *Pilliod* Dep. at 112.

13 The Pilliods have a multitude of risk factors associated with development of NHL. *First*, age is a
14 significant risk factor for both Plaintiffs. Ex. 1, Nabhan *Pilliod* Dep. at 21:9–17. *Second*, both Plaintiffs
15 have a history of [REDACTED]. Ex. 6, Nabhan *Pilliod* Rep. at 8, 14, 29. *Third*, both Plaintiffs have a personal
16 history of [REDACTED]. *See* Ex. 1, Nabhan *Pilliod* Dep. 45:5–46:22; Ex. 6, Nabhan *Pilliod* Rep. at 7; Ex. 3,
17 Weisenburger *Pilliod* Dep. 193:14–21. *Fourth*, both Plaintiffs have a family history of [REDACTED]. *See* Ex.
18 6, Nabhan *Pilliod* Rep. at 8; Ex. 3, Weisenburger *Pilliod* Dep. at 50:13–18; Ex. 1, Nabhan *Pilliod* Dep.
19 43:22–45:4. *Fifth*, the Pilliods have a history of [REDACTED], with Mrs. Pilliod [REDACTED]
20 [REDACTED]. Ex. 6, Nabhan *Pilliod* Rep. at 8; Ex.
21 3, Weisenburger *Pilliod* Dep. at 203:2–23. *Sixth*, Mrs. Pilliod had [REDACTED]
22 [REDACTED],” and Mr. Pilliod had [REDACTED]
23 [REDACTED]. [REDACTED]. at 111:15–112:17; Ex. 1, Nabhan *Pilliod* Dep. at
24 61:2–8. *Seventh*, Mrs. Pilliod worked for years as a [REDACTED], thereby having increased exposure to
25 children and childhood viruses, which studies show carries a statistically significant increased risk of
26 developing NHL. *See* Ex. 1, Nabhan *Pilliod* Dep. at 351:6–353:19. *Eighth* Mr. Pilliod has had
27 [REDACTED], which has been linked to NHL. *Id.* at 62:22–63:13; Ex. 3,
28 Weisenburger *Pilliod* Dep. at 185:21–24.

1 **III. The Experts’ Exposure-Based Methodology.**

2 Both experts purport to use a differential diagnosis, which “is the *patient-specific process* of
3 elimination that medical practitioners use to identify the ‘most likely’ cause of [a disease or medical
4 condition].” *Cooper v. Takeda Pharm. Am., Inc.*, 191 Cal. Rptr. 3d 67, 88 (2015) (internal quotation
5 omitted). At the first stage, an expert must “rule in” all “possible causes” of the disease. *Id.* At the
6 second stage, the expert must “rule out” the potential “causes until the most probable one is isolated.”
7 *Id.* An expert performing a differential diagnosis need not rule out all other causes with “absolute
8 certainty.” *Id.* at 85. However, the expert must provide “a reasoned explanation illuminating why” he
9 or she ruled out the alternative causes. *Id.* An expert may only proceed when, through this process, the
10 expert can reliably conclude “within a reasonable medical probability” that the remaining possible cause
11 of the plaintiff’s specific disease constitutes the actual cause. *Id.*

12 **Dr. Nabhan** “ruled in” Roundup as a possible cause of both Plaintiffs’ NHL in a cursory fashion
13 based on the International Agency of Research on Cancer’s (IARC) classification of glyphosate as a
14 probable human carcinogen and a few isolated findings from several cherry-picked studies. For his
15 exposure threshold, Dr. Nabhan relies on (1) McDuffie 2001,¹ for the proposition that “[t]he risk of
16 NHL was statistically significantly increased among glyphosate exposed individuals more than two days
17 per year with an [odds ratio] of 2.12 (95% CI: 1.20–3.73)”; and (2) Eriksson 2008,² which he asserts
18 “showed an [odds ratio] of 2.36 (95% CI: 1.04–5.37) for developing NHL in individuals exposed to
19 glyphosate more than 10 days in their lifetime.” Ex. 6, Nabhan *Pilliod* Rep. at 17, 19. Based on these
20 two findings—which involve data not adjusted for other pesticides used by the participants—Dr.
21 Nabhan ruled in Roundup as a cause of the Pilliods’ NHLs because their exposure was “above the
22 threshold that had been described in the epidemiologic studies and scientific literature.” *Id.* at 22. In
23 other words, Dr. Nabhan will *always* rule in Roundup for a Plaintiff that has exposure for more than two
24 days per year or more than ten days in their lifetime. See Ex. 7, Nabhan *Hardeman* Dep. at 93:5–94:2.
25
26

27 ¹ Ex. 12, Helen H. McDuffie et al., *Non-Hodgkin's Lymphoma and Specific Pesticide Exposures in Men: Cross-Canada Study*
of Pesticides and Health, 10 CANCER EPIDEMIOLOGY, BIOMARKERS & PREVENTION 1155 (2001).

28 ² Ex. 13, Mikael Eriksson et al., *Pesticide exposure as risk factor for non-Hodgkin lymphoma including histopathological*
subgroup analysis, 123 INT’L J. CANCER 1657 (2008).

1 Dr. Nabhan also cites De Roos 2003,³ but minimizes its significance as it provides no threshold of
2 exposure on which to anchor his results-driven differential diagnosis.

3 Apart from Roundup, Dr. Nabhan’s report listed only [REDACTED] and an idiopathic cause as other
4 risk factors for Mrs. Pilliod. Ex. 6, Nabhan *Pilliod* Rep. at 21. Dr. Nabhan summarily ruled out an
5 idiopathic cause because Mrs. Pilliod met his minimum Roundup exposure levels discussed above—for
6 Dr. Nabhan, any individual who meets his minimal Roundup exposure level cannot by definition have
7 an idiopathic/unknown source for his or her disease. As for [REDACTED], Dr. Nabhan “was unable to
8 completely rule [it] out,” but cast it aside as a “negligible” contributing factor without explanation. *Id.*
9 But as became clear in his deposition, Dr. Nabhan ignored at least six other factors that increased Mrs.
10 Pilliod’s risk of developing NHL: [REDACTED]

11 [REDACTED]. Dr.
12 Nabhan defends his failure to consider such factors with similar vague generalities. *See, e.g.*, Ex. 1,
13 Nabhan *Pilliod* Dep. at 112:23–113:4 (ruling out [REDACTED] because it was “superficial” rather than
14 “invasive,” without explaining why that matters); *id.* at 351:19 (statistically significant link between
15 teaching and NHL does not “pass the smell test” despite increased viral exposures in the profession).

16 For Mr. Pilliod, the only other factors, besides Roundup, that Dr. Nabhan explicitly ruled in were
17 obesity and ulcerative colitis. Although Dr. Nabhan mentions age and the fact that the majority of NHL
18 cases are idiopathic under the section of his report entitled “Investigating the etiology of Mr. Pilliod’s
19 NHL,” Dr. Nabhan provides no analysis of these factors, so it is not clear whether he actually ruled them
20 in. *See* Ex. 6, Nabhan *Pilliod* Rep. at 27–31. What is clear is that Dr. Nabhan in his report disregarded
21 Mr. Pilliod’s [REDACTED].

22 **Dr. Weisenburger** ruled in Roundup for both of the Pilliods, relying on the same studies he has
23 cited in every other case in this litigation: McDuffie 2001, Eriksson 2008, and the North American
24 Pooled Project (NAPP), a still-unpublished (and apparently still shifting) data set. Ex. 3, Weisenburger
25 *Pilliod* Dep. at 40:17–22, 151:1–9. For Dr. Weisenburger, any plaintiff who has used a glyphosate
26
27

28 ³ Ex. 14, A.J. De Roos et al., *Integrative Assessment of Multiple Pesticides as Risk Factors for Non-Hodgkin’s Lymphoma Among Men*, 60 J. OCCUPATIONAL & ENV’T MED. 1 (2003).

1 based formulation for more than two days per year or more than ten days over a lifetime “fall[s] into the
2 . . . high risk category” for developing NHL. Ex. 4, Weisenburger *Adams* Dep. at 112:16–113:5.

3 Like Dr. Nabhan, Dr. Weisenburger ignored or dismissed many risk factors for NHL in Mr. and
4 Mrs. Pilliods’ records. For Mrs. Pilliod, the only risk factors Dr. Weisenburger ruled in were [REDACTED],
5 Roundup use, and [REDACTED].” Ex. 3, Weisenburger *Pilliod* Dep. at 112:18–21. For Mr.
6 Pilliod, the only risk factors Dr. Weisenburger ruled in were [REDACTED] and his use of Roundup.” *Id.* at
7 112:22–25. Because he did not rule them in, Dr. Weisenburger did not provide any substantive analysis
8 ruling out the Pilliods’ [REDACTED], or other
9 unique factors, including Mrs. Pilliod’s [REDACTED] and Mr. Pilliod’s [REDACTED].

10 Neither expert reliably rules in Roundup. Neither offers any insight beyond the general
11 causation evidence already presented, admitting that any potential mechanism for how Roundup might
12 cause NHL remains unknown and subject only to hypotheses. Neither expert provides any meaningful,
13 individualized analysis of the Pilliods’ home use or explains how their residential exposures can be
14 shoehorned to fit the experts’ cherry-picked epidemiological studies that primarily evaluate farmers with
15 more intense use of differently formulated agricultural glyphosate-based products. Both experts also
16 leave huge gaps in their examinations of other possible risk factors. For these reasons, Dr. Nabhan and
17 Dr. Weisenburger should be excluded from providing specific causation testimony.

18 LEGAL STANDARD

19 The Court plays an important gatekeeping role. First, the Court must inquire into the type of
20 material on which an expert relies, excluding the testimony if the expert relies on materials that an
21 expert cannot reasonably rely on “in forming an opinion upon the subject to which his testimony
22 relates.” *Sargon*, 288 P.3d at 1251 (quoting Cal Evid. Code § 801(b)). Second, the Court must inquire
23 into whether the material the expert relies on “actually supports the expert’s reasoning” and conclusions.
24 *Id.* at 1252 (citing Cal. Evid. Code § 802). Again, the Court must exclude the testimony if there “is
25 simply too great an analytical gap between the data and the opinion proffered.” *Id.* (citation omitted).
26 Finally, the Court must exclude any expert testimony if it is speculative or barred by other decisional
27 law. *Id.* “In short,” *Sargon* instructs trial courts “to make certain that an expert . . . employs in the
28 courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant

1 field.” *Id.* (quoting *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 152 (1999)). The materials
2 relied on by the expert must be reliable and the expert’s interpretation and application of the literature to
3 the specific plaintiff must be coherent and scientifically-based. *Cooper*, 191 Cal. Rptr. 3d at 95–96.

4 In the specific causation context, *Sargon* requires experts purporting to use a differential
5 diagnosis to conduct both the ruling in and ruling out phases in a reliable and consistent fashion. *See id.*
6 “[I]t is not enough for [an expert] to state that he employed differential diagnosis to reach his ultimate
7 conclusion;” the trial court must “delve into the particular witness’s method of performing a differential
8 diagnosis to determine if his or her ultimate conclusions are reliable.” *Poust v. Huntleigh Healthcare*,
9 998 F. Supp. 478, 496 (D.N.J. 1998). The Court cannot admit a differential diagnosis unless, after a full
10 analysis, it “contains a reasoned explanation illuminating why the facts have convinced the expert, and
11 therefore should convince the jury, that it is more probable than not the [defendant’s product] was a
12 cause-in-fact of the plaintiff’s injury.” *Cooper*, 191 Cal. Rptr. 3d at 86.

13 ARGUMENT

14 **I. The Experts’ Method for Ruling in Roundup as a Cause of the Pilliods’ NHL Is Unreliable.**

15 Both experts employ nearly identical rationales for “ruling in” glyphosate: (1) they pluck out
16 exposure data from a small subset of epidemiological studies primarily evaluating farmers’ use of
17 glyphosate, (2) they catalog the number of days they believe each Plaintiff used Roundup, and (3) they
18 conclude Roundup could be a cause of each Plaintiff’s NHL based solely on the fact that each Plaintiff’s
19 use exceeded the bare minimum exposure selected from one figure from each of their selectively curated
20 studies. This approach does not satisfy *Sargon*’s reliability standards at the specific causation stage.

21 **A. The Experts’ Reliance on a Subset of Flawed, Cherry-Picked Studies Does Not** 22 **Provide a Reliable Basis for Ruling in Glyphosate as a Cause of the Pilliods’ NHL.**

23 Both experts rely on a sliver of the evidence presented at the general causation stage to rule in
24 Roundup as a potential cause of the Plaintiffs’ NHL. Both primarily rely on subgroups within two
25 studies mainly evaluating the agricultural use of glyphosate by farmers: McDuffie 2001, which they
26 assert showed an increased risk of NHL among individuals exposed “more than two days a year,” and
27 Eriksson 2008, which allegedly showed the same for individuals exposed “more than 10 days in their
28 lifetime.” Dr. Weisenburger goes a little further, citing unadjusted data from an unpublished

1 presentation of NAPP data that he admits is old and has been superseded. Ex. 3, Weisenburger *Pilliod*
2 Dep. at 240:15–18 (“Q. All right. In fact, it’s true that all of the data, every single analysis in Exhibit
3 19, is old and has been superseded; correct? A. Yes.”). These studies are defective in a number of ways
4 that are disqualifying.

5 *First*, the studies did not properly adjust for confounding variables. Both experts admit that the
6 exposure response analyses in both McDuffie 2001 and Eriksson 2008 failed to adjust for the use of
7 other pesticides, which is critical since other pesticides have been associated with an increased risk of
8 NHL. Ex. 1, Nabhan *Pilliod* Dep. at 236:8–11, 242:6–10, 248:11–15; Ex. 3, Weisenburger *Pilliod* Dep.
9 at 129:24–130:1, 140:8–11, 95:20–96:2 (admitting that other pesticides can cause NHL). A study that
10 fails to account for such confounding factors does not meet *Sargon’s* standards. *In re Lockheed Litig.*
11 *Cases*, 23 Cal. Rptr. 3d 762, 774 (2005) (“We conclude that the multiple-solvent studies provide no
12 reasonable basis for an opinion that any of the solvents here at issue can cause disease.”). In fact, Dr.
13 Weisenburger has admitted that it is “appropriate to adjust for other pesticides” and “an important thing”
14 that “should” be done when there is enough data. Ex. 4, Weisenburger *Adams* Dep. at 45:8–15. Even
15 more problematic, Dr. Nabhan relies on a multivariate analysis (an analysis that considers other
16 variables like pesticides) from McDuffie 2001 when it helps his outcome-driven position, but spurns the
17 multivariate analysis from Eriksson 2008 which does not support his position. Ex. 6, Nabhan *Pilliod*
18 Rep. at 17 (“Importantly, among individual pesticides, carbaryl, lindane, DDT, and malathion
19 insecticides, and captan fungicide user/nonuser were included in the initial multivariate model and found
20 not to contribute significantly to the risk of NHL.”); Ex. 1, Nabhan *Pilliod* Dep. at 173–74. In the end,
21 Dr. Nabhan admits Eriksson’s multivariate analysis does not show a statistically significant increased
22 risk of developing NHL after exposure to glyphosate. Ex. 1, Nabhan *Pilliod* Dep. at 254:17–21. In his
23 general causation decision, Judge Chhabria specifically cited this issue as “a serious consideration and
24 one that must be accounted for in a reliable expert report assessing the epidemiology evidence.” *In re*
25 *Roundup Prod. Liab. Litig.*, No. 16-MD-02741-VC, 2018 WL 3368534, at *13 (N.D. Cal. July 10,
26 2018). Neither expert has accounted for their reliance on “numbers unadjusted for other pesticides”; this
27 reliance raises “serious methodological concerns” that should be “disqualifying.” *Id.* at 26 (citing
28 *Nelson v. Tennessee Gas Pipeline Co.*, 243 F.3d 244, 253 (6th Cir. 2001)).

1 *Second*, the experts also admit that the data plucked from McDuffie 2001 and Eriksson 2008 did
2 not consider specific subtypes of NHL. *See, e.g.*, Ex. 3, Weisenburger *Pilliod* Dep. 139:20–21.
3 McDuffie 2001 did not attempt to stratify data by subtypes of NHL, while Eriksson 2008 actually found
4 ***no statistically significant increased risk*** of development of DLBCL after glyphosate exposure—data
5 the experts ignore because it does not support their desired outcome. Ex. 1, Nabhan *Pilliod* Dep. at
6 253:8–13; Ex. 3, Weisenburger *Pilliod* Dep. at 140:12–15. They disclaim the importance of looking at
7 subtypes while at the same time admitting that different NHL subtypes have different risk factors and
8 causes. Ex. 5, Weisenburger *Stevick* Dep. at 32:20–33:4; Ex. 1, Nabhan *Pilliod* Dep. at 27:14–18; 38:4–
9 9 (“[PCNSL is] different in prognosis, different in treatment, different in presentation.”). The only other
10 study Dr. Nabhan relies on, De Roos 2003, also did not break down any of its analyses by subtype of
11 NHL. Ex. 1, Nabhan *Pilliod* Dep. 269:7–10. In fact, Dr. Nabhan could not name a single study that
12 shows a statistically significant increased risk of DLBCL development after glyphosate exposure. *Id.* at
13 289:23–290:4.

14 After admitting that no peer-reviewed publication, adjusted for other pesticide use, shows a
15 statistically significant increased risk for DLBCL with increased exposure to glyphosate, Dr.
16 Weisenburger sought refuge in the NAPP study. Ex. 3, Weisenburger *Pilliod* Dep. at 172:16–22. But
17 Dr. Weisenburger’s selective citation of NAPP data only illustrates his outcome-driven approach.
18 NAPP is “a pooled analysis of data from Canada and the United States that ha[d] been previously
19 reported.” *Id.* at 155:5–9. It includes, among other studies, the data from McDuffie 2001 and De Roos
20 2003. Although it is still unpublished, three slide decks from three different presentations given in 2015
21 and 2016 highlight its findings. Even though he is listed as an author, Dr. Weisenburger disavows the
22 June 2016 presentation,⁴ which contains “15 analyses,” three of which looked specifically at DLBCL,
23 “adjusted for other pesticide use,” and found no “evidence for a dose-response relationship between
24 glyphosate and NHL.” Ex. 3, Weisenburger *Pilliod* Dep. 171:18–172:6. Instead, Dr. Weisenburger
25 again cherry-picks an odds ratio, unadjusted for other pesticides, from an August 2015 presentation⁵ that
26

27 ⁴ Ex. 15, Manisha Pahwa et al., *A detailed assessment of glyphosate use and the risks of non-Hodgkin lymphoma overall and*
28 *by major histological sub-types: findings from the North American Pooled Project* (June 10, 2016).

⁵ Ex. 16, Manisha Pahwa et al., *An Evaluation of Glyphosate Use and the Risks of Non-Hodgkin Lymphoma Major*
Histological Sub-Types in the North American Pooled Project (Aug. 31, 2015).

1 he admits is outdated, *id.* at 240:15–18, but says shows a statistically significant increased risk of
2 developing NHL when glyphosate is used more than two days per year. As Judge Chhabria already
3 explained, when adjusted for other pesticide use, the odds ratios in the NAPP analysis were generally
4 not statically significant and dropped even lower “[w]hen proxy respondents were removed from the
5 data.” *In re Roundup*, 2018 WL 3368534, at *10.⁶

6 *Third*, the experts have failed to explain why they ignored the broader array of studies that
7 describe non-confounded data or apply one standard to validate glyphosate studies and another for
8 studies of other risk factors—apart from the naked fact that they did not like the conclusions. In
9 particular, both experts fail to reliably explain their dismissal of the Agricultural Health Study (“AHS”).
10 They admit the AHS adjusted for other pesticides and considered certain subtypes of NHL, that it is the
11 largest and longest-running study to consider whether glyphosate has any relationship to NHL, that it
12 considered the largest number of people, and that it conducted an exposure-response analysis. *See, e.g.*,
13 Ex. 5, Weisenburger *Stevick* Dep. at 61:5–69:23; Ex. 1, Nabhan *Pilliod* Dep. at 291:22–304:24. They
14 criticize the AHS for the potential for participant “exposure misclassification” and the failure of a third
15 of the participants to return a follow-up questionnaire. Ex. 3, Weisenburger *Pilliod* Dep. at 221:14–
16 222:5. But the studies the experts rely on carry similar problems. For example, McDuffie 2001 cited
17 the “potential for recall bias and for misclassification of pesticide exposure” as some of the limitations
18 on the study and noted the mixed response rates to postal questionnaires. *See* Ex. 12, McDuffie 2001 at
19 1158, 1161. Experts cannot “pick and choose” the scientific studies that suit them best and still be
20 deemed reliable. *See Lust v. Merrell Dow Pharm., Inc.*, 89 F.3d 594, 598 (9th Cir. 1996) (affirming
21 court’s exclusion of expert testimony, explaining that experts cannot “pick and choose” from the
22 scientific landscape).

23 *Fourth*, the experts only rely on epidemiological evidence to support their findings, but none of
24 the studies on which they rely establish a relative risk of greater than 2.0 after adjusting for the use of
25 other pesticides, which is required under California law. “When statistical analyses or probabilistic
26 results of epidemiological studies are offered to prove specific causation . . . under California law those

27 _____
28 ⁶ “Proxy respondents or surrogates, often spouses or next of kin, are used when the study participants themselves are not
available, typically because they have died or are too ill to participate. Proxy respondents are generally considered less
reliable than the study participants themselves.” *In re Roundup*, 2018 WL 3368534, at *16.

1 analyses must show a relative risk greater than 2.0 to be ‘useful’ to the jury.” *Cooper*, 191 Cal. Rptr. 3d
2 at 98 (quoting *Daubert v. Merrell Dow Pharm. Inc.*, 43 F.3d 1311, 1320 (9th Cir. 1995)). “This is so,
3 because a relative risk greater than 2.0 is needed to extrapolate from generic population-based studies to
4 conclusions about what caused a specific person’s disease.” *Id.*; see also *In re Bextra & Celebrex Mktg.*
5 *Sales Practices & Prod. Liab. Litig.*, 524 F. Supp. 2d 1166, 1172 (N.D. Cal. 2007) (epidemiological
6 studies are probative of specific causation “only if the relative risk is greater than 2.0”). Plaintiffs’
7 experts implicitly acknowledge this standard in citing only subgroups within studies with a risk ratio
8 above 2.0. But, as explained above, *none of these studies are published and peer-reviewed and they do*
9 *not appropriately adjust for the use of other pesticides.* The studies are thus not “useful” to the jury and
10 the experts cannot rely upon them in opining on specific causation.

11 **B. The Experts’ Repeated Failure to Do Anything Beyond Pointing to Their Preferred**
12 **Studies Substantiates the Unreliability of Their Approach.**

13 The experts start and end their analysis with their cherry-picked studies. Both fail to provide an
14 individualized analysis of Plaintiffs—who were casual home users—and how their use and exposure fits
15 into their selected studies’ parameters. The relied-upon studies largely assessed agricultural workers’
16 use of industrial glyphosate base formulas. Only McDuffie 2001 mentions the home and garden users,
17 but does not identify how many study participants were home and garden users.

18 Even a simple comparison of Mr. and Mrs. Pilliod reveals drastically different levels of use and
19 potential rates of exposure based on their duration and frequency of spraying, and the type of clothing
20 each wore during use. But the experts make no effort to explain how the individualized use of Roundup
21 operated to cause Mr. Pilliod’s DLBCL or Mrs. Pilliod’s PCNSL. Indeed, they have not pointed to any
22 marker or test that would identify Roundup as the cause of any Plaintiff’s NHL, as opposed to the
23 myriad of other potential causes. Ex. 1, *Nabhan Pilliod Dep.* at 105:4–20 (“Q. Is there any imaging
24 pathology, biopsy, staining or otherwise that can identify a DLBCL [or a PCNSL] that occurred after
25 using Roundup? A. Not to my knowledge.”); Ex. 4, *Weisenburger Adams Dep.* at 55:8–18; Ex. 2,
26 *Nabhan Adams Dep.* at 192:9–17. For these experts, as long as a plaintiff used Roundup for more than
27 two days per year or more than ten lifetime days, their inquiry is complete. The occasional spring
28 gardener gets lumped in with professional farmer; the spray-bottle user is the same as the agricultural

1 worker hand-mixing industrial batches of glyphosate. Such robotic application of these thresholds is not
2 an appropriate utilization of expert testimony. *Guinn v. AstraZeneca Pharm. LP*, 602 F.3d 1245, 1255
3 (11th Cir. 2010) (“The fact that exposure to a substance may be a risk factor for a disease does not make
4 it an actual cause simply because the disease developed.” (quotation marks and alterations omitted)); *see*
5 *also In re Lipitor (Atorvastatin Calcium) Mktg., Sales Practices and Prod. Liab. Litig.*, 892 F.3d 624,
6 644–45 (4th Cir. 2018) (affirming exclusion of specific causation expert who “appeared to simply
7 conclude that ‘so long as the patient took Lipitor and developed diabetes, then Lipitor was a substantial
8 contributing factor’”).

9 Finally, any invocation of the experts’ “clinical expertise” to support their conclusions should be
10 prohibited. Both admitted they have never asked a patient about Roundup exposure, have never
11 determined that Roundup caused a patient’s NHL, and have never even used a differential diagnosis to
12 assess the cause of a patient’s NHL. *See, e.g.*, Ex. 7, Nabhan *Hardeman* Dep. at 21:17–20; Ex. 4,
13 Weisenburger *Adams* Dep. at 54:3–15; *id.* at 76:19–22; Ex. 8, Weisenburger *Hardeman* Dep. at 103:17–
14 21. Accordingly, these experts should not be allowed to invoke their “clinical experience” now as a
15 license to engage in a causation analysis that they admit they have never done in practice for a product
16 about which they have never asked a patient. *Braun v. Lorillard Inc.*, 84 F.3d 230, 235 (7th Cir. 1996).

17 **II. The Experts Provide No Reliable Basis for Ruling Out Other Potential Causes of Plaintiffs’** 18 **NHL.**

19 The experts’ methodology also fails at the second differential diagnosis step because they offer
20 no principled basis for ruling out alternative potential causes of each Plaintiff’s NHL. An expert
21 conducting a differential diagnosis “must provide reasons for rejecting alternative hypotheses ‘using
22 scientific methods and procedures’ and the elimination of those hypotheses must be founded on more
23 than ‘subjective beliefs or unsupported speculation.’” *Clausen v. M/V New Carissa*, 339 F.3d 1049,
24 1058 (9th Cir. 2003) (quoting *Claar v. Burlington N. R.R. Co.*, 29 F.3d 499, 502 (9th Cir. 1994)). Here,
25 Mr. and Mrs. Pilliod each have a unique medical history and range of different recognized risk factors
26 that both experts dismiss based on pure say-so. Moreover, they offer no logical explanation for why
27 they rule out non-Roundup factors using one set of standards that, if faithfully applied, would require
28 them to rule out Roundup as well. *Sargon* prohibits such a results-driven methodology.

1 **A. The Pilliods’ Experts Do Not Meaningfully Address Their Individual Risk Factors.**

2 Dr. Nabhan’s report and Dr. Weisenburger’s initial deposition testimony revealed that they failed
3 to consider a range of risk factors facing the Pilliods. When confronted with those additional risk factors
4 in their depositions, the unscientific, outcome-driven nature of their opinions became clear:

5 ██████████. The same McDuffie 2001 study that Dr. Nabhan and Dr. Weisenburger
6 use to rule in Roundup establishes that a ██████████ more than doubles the risk of NHL. Ex.
7 1, Nabhan *Pilliod Dep.* at 179:16–23; Ex. 3, Weisenburger *Pilliod Dep.* at 147:19–22. Indeed, the odds
8 ratio for ██████████ was higher than the odds ratio relied upon to rule in glyphosate. This
9 fact goes to the crux of their specific causation opinion’s validity: “whether there is ‘substantial
10 evidence’ of an alternative explanation for the disease.” *Cooper*, 191 Cal. Rptr. 3d at 92.

11 Both experts admitted that studies show statistically significant relationships between Mr.
12 Pilliod’s specific types of ██████████ and NHL. *See* Ex. 1, Nabhan *Pilliod Dep.* at 180:14–181:4; Ex. 3,
13 Weisenburger *Pilliod Dep.* at 188:11–189:4. Yet both experts sought to dismiss these studies and
14 thereby justify their failure to consider these ██████████. Dr. Nabhan advances a different excuse for
15 each study, protesting that one does not consider other factors like sun exposure, disagreeing with
16 another study’s conclusion without explanation, and complaining that another study is just “one paper.”
17 *See* Ex. 1, Nabhan *Pilliod Dep.* 180:14–181:4 (acknowledging study that showed statistically significant
18 increased risk of NHL for people with ██████████ and dismissing
19 it because it “doesn’t look at other facts” like sun exposure); *id.* at 333:9–19 (disagreeing with study that
20 shows ██████████ “almost doubled” risk of NHL); *id.* at 348:21–349:5 (dismissing
21 association between ██████████ and NHL because “we just agreed we have to look at the totality of
22 evidence, not at one paper or another.”). Despite acknowledging the same evidence, Dr. Weisenburger
23 does not believe that Mr. Pilliod’s ██████████ are a cause of NHL just “because it makes no sense.” Ex.
24 3, Weisenburger *Pilliod Dep.* at 189:12–13. He “just can’t explain it.” *Id.* at 189:20.

25 The same flawed methodology contaminates their assessment of Mrs. Pilliod’s ██████████.
26 While Mrs. Pilliod’s ██████████ would suggest she is at increased risk via the McDuffie 2001 study,
27 Dr. Nabhan rules out her ██████████ as a potential cause because it was “superficial” rather than
28 “invasive,” without further explaining why this matters. Ex. 1, Nabhan *Pilliod Dep.* at 112:23–113:4.

1 Dr. Weisenburger merely says “No” when asked about her [REDACTED] contribution. Ex. 3,
2 Weisenburger *Pilliod* Dep. at 193:16–24. These ipse dixit conclusions hardly follow a reliable method
3 of ruling out alternative causes; they spring from a commitment to a predetermined outcome.

4 [REDACTED]. Dr. Nabhan and Dr. Weisenburger also ignore that a [REDACTED]
5 [REDACTED] increases the risk of NHL—according to the same McDuffie 2001 study they cite to rule in
6 Roundup. Ex. 1, Nabhan *Pilliod* Dep. at 178:5–179:5; Ex. 3, Weisenburger *Pilliod* Dep. at 144:2–6.
7 Because his report neglected to consider this family history, Ex. 6, Nabhan *Pilliod* Rep. at 26 ([REDACTED]
8 [REDACTED]; nothing contributory or substantial from reviewing the medical records.”), Dr.
9 Nabhan sought to rule out Mr. Pilliod’s [REDACTED] on the fly. Ex.
10 1, Nabhan *Pilliod* Dep. at 44:20–45:4. He also ruled out Mrs. Pilliod’s [REDACTED] although her sister
11 [REDACTED] and her father [REDACTED]. Ex. 6, Nabhan *Pilliod* Rep. at 13.
12 Without any analysis, he proclaimed “[t]here is nothing in Mrs. Pilliod’s history to suggest a familial
13 predisposition to her developing NHL.” *Id.* at 13–14. Similarly, while Dr. Weisenburger acknowledged
14 the Pilliods’ [REDACTED] and its statistical significance under McDuffie 2001, he professed
15 ignorance as to what it means: “we don’t know what’s driving that.” Ex. 3, Weisenburger *Pilliod* Dep. at
16 50:10–18; 144:2–12; 147:23–25. Again, these empty conclusions reveal their inability to conduct a
17 *reliable* differential diagnosis, and stand in stark contrast to their unwillingness to consider that the odds
18 ratio for glyphosate in McDuffie 2001 could be driven by other pesticide use.

19 [REDACTED] Dr. Nabhan and Dr. Weisenburger rightfully acknowledge that
20 [REDACTED] increase the risk of NHL. Ex. 6, Nabhan *Pilliod* Rep. at 13; Ex. 3, Weisenburger
21 *Pilliod* Dep. at 48:15–17. Mrs. Pilliod suffers from [REDACTED]. Ex.
22 3, Weisenburger *Pilliod* Dep. 111:17–19. Dr. Nabhan admitted that he did not “look into” whether Mrs.
23 Pilliod had been diagnosed with [REDACTED] because he said there is no connection to NHL.
24 Ex. 1, Nabhan *Pilliod* Dep. at 154:1–4. When confronted with a paper that showed a statistically
25 significant incidence ratio for NHL in patients with [REDACTED], he continued to urge “I still don’t
26 know if she has [REDACTED] or not, but...”. *Id.* at 158:24–159:12 (ellipses in original). When confronted
27 with Mrs. Pilliod’s medical records confirming her diagnosis, Dr. Nabhan clung to his “always
28 Roundup” opinion. *Id.* at 203:18–24 (“And let’s assume that these records that are shown in Exhibit 16

1 are correct, and she really did have [REDACTED] would it still be your opinion that her 30-
2 year exposure to Roundup or glyphosate was a substantial contributing factor toward her diagnosis of
3 PCNSL? A. Yes, it would be.”). Meanwhile, Dr. Weisenburger attempted to explain away the
4 relationship by pointing to where the lymphomas occur, but ultimately conceded he lacked data to
5 conclude whether it increased the risk of NHL overall or NHL involving the thyroid gland. Ex. 3,
6 Weisenburger *Pilliod* Dep. at 118:25–126:6 (“[W]e don’t have any data to say one way or the other;
7 true? A. We don’t.”). Hence, they both accept that the link exists, but summarily reject its relevance
8 because it does not fit with their pre-conceived litigation opinion.

9 [REDACTED]. Prior to his DLBCL diagnosis, Mr. Pilliod had a type of [REDACTED]
10 [REDACTED]. Ex. 1, Nabhan *Pilliod* Dep. at 62:22–63:8. Dr. Weisenburger admitted
11 that studies showed an increased risk of NHL in patients with [REDACTED], but ruled it out just “because
12 it doesn’t make any sense biologically.” Ex. 3, Weisenburger *Pilliod* Dep. at 185:21–24. Despite the
13 existence of these studies, Dr. Nabhan was “not aware of [REDACTED] increasing the risk of non-Hodgkin
14 lymphoma.” Ex. 1, Nabhan *Pilliod* Dep. at 324:3–4. After seeing a study that indicates “there is a
15 statistically significant doubling of the risk for non-Hodgkin lymphoma in the future after suffering
16 [REDACTED],” Dr. Nabhan recoiled. *Id.* at 325:23–326:1. With no hint of irony, he reflexively asked
17 whether the result was adjusted for other confounding factors—a reasonable scientific question for sure
18 but one he refused to consider when ruling in Roundup. *Id.* at 326:2–326:9. He then pivoted to simply
19 disagreeing “with that data,” speculating that it “could be a surrogate” for HIV. *Id.* at 326:16–25. Dr.
20 Nabhan’s on-the-fly improvisation betrays his lack of scientific fidelity and coherence. Dismissing
21 proof of an alternative cause just because “it doesn’t make any sense” or because it “could” be a
22 surrogate for another cause demonstrates that neither Dr. Weisenburger nor Dr. Nabhan employed any
23 semblance of a reliable method to rule out alternative causes for Mr. Pilliod’s NHL.

24 [REDACTED]. Dr. Nabhan rejects the studies suggesting a connection between [REDACTED] and NHL.
25 Confronted with studies that showed links between smoking and NHL, Dr. Nabhan merely stated he was
26 “not aware of [REDACTED] associated with non-Hodgkin lymphoma.” *Id.* at 212:1–10; *see also id.* at
27 355:13–357:1. He dismissed these studies by speculating that “you could probably ask 20 lymphoma
28 specialists whether [REDACTED] increases the risk of [NHL], and you’ll probably get 100 percent answer

1 that no.” *Id.* at 358:8–11. He thus ruled out the Pilliods’ ██████ history through ““subjective beliefs or
2 unsupported speculation,”” rather than reliable and scientific methods. *Clausen*, 339 F.3d at 1058.

3 ██████. One of Dr. Nabhan’s most unreliable methods of ruling out potential risk
4 factors appears when he tries to rule out the risk factors associated with Mrs. Pilliod’s ██████
5 ██████. Faced with a meta-analysis of nineteen studies that shows ██████ have an increased risk of
6 NHL because of their increased exposure to children and attendant viruses, he dismissed it because “[i]t
7 doesn’t pass the smell test,” and he would not “even bother reading this paper.” Ex. 1, Nabhan *Pilliod*
8 Dep. at 351:16–352:14. At the same time, however, he admitted that if ██████ for some odd reason
9 [are] exposed to something further that may lead to developing a particular cancer, then you got my
10 attention,” but did not engage scientifically with the data to rule out the possibility. ██████ 352:19–21. Dr.
11 Weisenburger merely dismisses it because it is not conclusive. Ex. 3, Weisenburger *Pilliod* Dep. at
12 197:16–198:2. As discussed below, Dr. Weisenburger’s standards for considering conclusive evidence
13 fluctuate by convenience and, alongside Dr. Nabhan’s smell-test method, reeks of unreliability.

14 ██████ is a risk factor for NHL. *See, e.g., id.* at 186:18–19. Dr. Nabhan acknowledged that
15 the risk of being diagnosed with DLBCL is six times higher for a man ██████, like Mr. Pilliod
16 who was ██████, than for a man in ██████. Ex. 1, Nabhan *Pilliod* Dep. at 35:13–16. Dr. Nabhan
17 further admitted that “[i]t would not be surprising” for a person who never used Roundup to suffer from
18 DLBCL ██████. *Id.* at 107:11–15. Nevertheless, he and Dr. Weisenburger rule out
19 ██████ based on the conclusory assumption that ██████ doesn’t cause cancer.” *Id.* at 238:14; Ex. 3,
20 Weisenburger *Pilliod* Dep. at 186:21–23. Contradictorily, Dr. Nabhan argues that “[t]he older we live,
21 the more likely we would be exposed to carcinogens. The more likely we would be exposed to materials
22 that, ██████, we are not exposed to.” Ex. 1, Nabhan *Pilliod* Dep. at 238:15–18. But this
23 explanation argues against, not for, ruling out ██████. As Mr. Pilliod’s record shows, in ██████ he has
24 been exposed to ██████, and hence why ██████
25 ██████ cannot be so summarily ruled out without deeper scrutiny.

26 The incidence of PCNSL, Mrs. Pilliod’s form of NHL, peaks in the late fifties and early sixties.
27 *Id.* at 38:16–39:2. Mrs. Pilliod was ██████ when diagnosed with PCNSL. Ex. 6, Nabhan
28 *Pilliod* Rep. at 4–5. Dr. Nabhan agreed that “there was nothing unusual about Mrs. Pilliod’s age when

1 she was diagnosed with PCNSL.” Ex. 1, Nabhan *Pilliod* Dep. at 131:20–25. Despite insisting that
2 “█ doesn't cause cancer,” *id.* at 238:14, Dr. Nabhan has stated that █ *can* cause PCNSL. Ex. 9,
3 Nabhan *Stevick* Dep. at 17:23–18:9 (“in other patients maybe that may have had no other risk factors, it
4 could be that █ developed—caused [PCNSL]”). This admission gives the lie to his position in this
5 case that █ can be summarily ruled out as a risk factor for Mrs. Pilliod’s cancer, and reveals that for
6 Dr. Nabhan, Roundup always trumps any other factor, without any coherent explanation as to why.

7 █ Finally, Dr. Nabhan and Dr. Weisenburger ruled out █ in a similarly glib fashion.
8 █ are risk factors for NHL, especially DLBCL. Ex. 3, Weisenburger *Pilliod*
9 Dep. at 110:17–21. Mr. Pilliod is █ and Mrs. Pilliod is █ *Id.* at 50:1–5. Yet despite
10 agreeing that █ is a risk factor, Dr. Nabhan ruled it out because he found the evidence
11 inconclusive. Ex. 1, Nabhan *Pilliod* Dep. at 316:10–16. It did not matter that the evidence for Roundup,
12 by his standards, would also be considered inconclusive. Similarly, Dr. Weisenburger ruled out █
13 because the odds ratio was less than for glyphosate exposure. Ex. 3, Weisenburger *Pilliod* Dep. at
14 135:19–136:12, 137:5–9. (“Q. Just want to make sure I understand what you said in terms of the risk
15 ratios. Table 8 has an odds ratio of 2.12, the █ has a relative risk of 1.4, and you ranked, so to
16 speak, the 2.12 higher than the 1.4 and, thus, it was a substantial factor; right? A. Yes.”). Ironically, he
17 would not apply the same standard to rule out Roundup. *Id.* at 137:10–17 (“Q. All right. If there was a
18 factor that was 3 or 2.5 that was applicable to the Pilliods, I know you don't agree with that right now,
19 but just say there was, would that become a substantial factor over Roundup? . . . THE WITNESS: It
20 would depend on what it was.”) These inconsistent standards demonstrate their methods’ unreliability.

21 **B. Dr. Nabhan and Dr. Weisenburger Cannot Reliably Rule Out the Unknown Causes**
22 **of the Pilliods’ NHL and Instead Always Point to Roundup.**

23 Just as they fail to engage with the known alternative risk factors confronting the Pilliods, Dr.
24 Nabhan and Dr. Weisenburger take an equally unscientific approach to the possibility of unknown
25 causes: they simply ignore the prospect. While conducting a reliable differential diagnosis involving a
26 disease of largely unknown origin does not necessarily require an expert “to eliminate all other possible
27 causes of a condition,” *Wendell v. GlaxoSmithKline LLC*, 858 F.3d 1227, 1237 (9th Cir. 2017), an expert
28 cannot summarily dismiss potential unknown causes without any measure of scientific rigor. *Id.* at 1232

1 (confirming that “principles and methodology used by an expert [must be] grounded in the methods of
2 science”) (citing *Clausen*, 339 F.3d at 1056). Where Plaintiffs have experienced an unfortunately
3 common disease and where some seventy percent of cases lack an identifiable cause, these experts’
4 summary disregard of such unknown causes deserves special scrutiny. *See, e.g., Perry v. Novartis*
5 *Pharm. Corp.*, 564 F. Supp. 2d 452, 470 (E.D. Pa. 2008) (where a condition has mostly unknown
6 causes, an “analysis beyond a differential diagnosis will likely be required” to render a reliable specific
7 causation opinion); *Tamraz*, 620 F.3d at 675 (“Not every opinion that is reached via a differential-
8 diagnosis method will meet the standard of reliability required by *Daubert*[.]”) (internal quotation marks
9 omitted); *Doe v. Ortho-Clinical Diagnostics, Inc.*, 440 F. Supp. 2d 465, 478 (M.D.N.C. 2006) (“[The
10 expert] did not properly perform the differential diagnosis given his failure to consider within his
11 analysis the high probability that an unknown genetic cause cannot be ruled out as the specific cause of
12 Minor Child Doe’s autism”); *Henrickson v. ConocoPhillips Co.*, 605 F. Supp. 2d 1142, 1162–63 (E.D.
13 Wash. 2009) (rejecting differential diagnosis where it was un rebutted that eighty to ninety percent of all
14 cases of AML were idiopathic, but expert did not address idiopathy).

15 Dr. Weisenburger and Dr. Nabhan cannot survive the special scrutiny required for differential
16 diagnoses where idiopathic causes prevail in seventy percent of cases. Dr. Weisenburger concedes that
17 in cases where the cause of a patient’s NHL is idiopathic, genetic mutations occur without explanation.
18 *See, e.g., Ex. 4, Weisenburger Adams Dep.* at 164:3–16. He further concedes that those same genetic
19 mutations can occur in people exposed to Roundup, independent of their Roundup exposure. *See id.* at
20 20–25. As such, Roundup cannot automatically be deemed the cause of an individual Plaintiff’s NHL.
21 Rather, in light of the largely idiopathic nature of NHL, Dr. Nabhan and Dr. Weisenburger must provide
22 some basis for saying that the Pilliods’ cancer would not have occurred absent exposure to Roundup.
23 And yet they cannot do so, admitting that the Pilliods could just as possibly have gotten NHL even if
24 they had not been exposed to Roundup. *See Ex. 1, Nabhan Pilliod Dep.* at 107:17–108:7; 135:5–11; *Ex.*
25 *3, Weisenburger Pilliod Dep.* at 76:9–77:11; *see also Ex. 4, Weisenburger Adams Dep.* at 93:10–16
26 (when asked whether it is even possible that a person could be sufficiently exposed to Roundup, develop
27 NHL, and *not* have Roundup be the cause, he answered, “probably not.”). Pretending unknown causes
28 do not exist is not the equivalent of reliably ruling them out.

1 Dr. Nabhan’s testimony makes equally clear that he will find causation whenever a plaintiff has a
2 “significant” exposure, regardless of idiopathic causes, even “just by listening and learning” from
3 plaintiffs’ counsel. *See* Ex. 10, Nabhan *Hall* Dep. at 28:7–29:7. Remarkably, Dr. Nabhan recently
4 testified that he will conclude 100 out of 100 times “that Roundup was more likely than not a substantial
5 contributing factor” if the 100 were exposed to Roundup—despite the scientific fact that most NHL
6 cases are idiopathic. Ex. 11, Trial Tr. vol. 2, 271:9–20 (Feb. 4, 2019); *see also id.* at 260:3–261:10,
7 276:19–24. He admits so much even though “there is no distinguishing feature in the world for a
8 DLBCL [or PCNSL] that resulted from idiopathic reasons as compared to a DLBCL [or PCNSL] that
9 developed after Roundup use.” Ex. 1, Nabhan *Pilliod* Dep. at 105:8–106:14. Perhaps the most stunning
10 admission was his view that if the Pilliods had precisely the same medical history but had never used
11 Roundup, he would conclude their NHL was probably idiopathic. *Id.* at 108:10–109:9, 160:22–161:3.
12 Yet because they used Roundup and nothing else, “clearly, it’s not in their case.” *Id.* at 191:6–9.

13 These experts’ “always Roundup” methodology cannot be reconciled with science. It cannot be
14 the case that mere exposure for greater than two days in one year, with subsequent disease development,
15 automatically provides the basis for a legally admissible expert opinion, especially when dealing with a
16 comparatively common disease which both agree is largely idiopathic. In this respect, Dr. Nabhan and
17 Dr. Weisenburger’s reasoning tracks that of the expert excluded in *Lipitor*, whose conclusions “focused
18 almost exclusively on the fact that [the plaintiff] took the drug and later developed the disease, rather
19 than explaining what led her to believe that it was a substantial contributing factor as compared to other
20 possible causes.” 892 F.3d at 645. Here, as in *Lipitor*, the experts’ reports simply “dismiss other
21 possible causes in favor of [Roundup] in a cursory fashion that appeared closer to an ipse dixit than a
22 reasoned scientific analysis.” *Id.* The Court should exclude each experts’ opinion on that basis.

23 **C. Plaintiffs’ Experts Rule Out Non-Roundup Risk Factors with Arguments They Fail**
24 **to Faithfully Apply to Roundup.**

25 Perhaps most fatal to the experts’ methodology is the unscientific manner in which they generate
26 arguments to rule out other potential causes of the Pilliods’ NHL, but abandon those very same
27 arguments when it comes to Roundup. The reason is clear: had they faithfully applied those arguments
28

1 to Roundup, they would have ruled out Roundup as well. *Sargon* means nothing if it permits such
2 outcome-driven, inconsistent application of an expert’s stated methodology.

3 Their inconsistent and unreliable approach is most evident when addressing the Pilliods’ past
4 history of cancer. Both rule in Roundup based on an odds ratio of 2.12 for the subgroup in McDuffie
5 2001, but rule out past history of cancer despite the same study revealing an odds ratio of 2.43. Dr.
6 Weisenburger’s testimony is even more inconsistent. Dr. Weisenburger agreed that he determined
7 Roundup was a substantial factor by ranking the odds ratios. *See* Ex. 3, Weisenburger *Pilliod* Dep. at
8 137:5–9; Ex. 5, Weisenburger *Stevick* Dep. at 113:16–116:6 (“Q. And explain to me, how do you go
9 about ranking the risk factors? A. Well, the higher the odds ratio, the more likely the risk factor is a real
10 risk factor, and the higher the odds ratio, the more likely that that risk factor is going to be the most
11 important risk factor.”). But he backtracked when confronted with the opposite scenario. Ex. 3,
12 Weisenburger *Pilliod* Dep. at 137:10–17 (“Q. All right. If there was a factor that was 3 or 2.5 that was
13 applicable to the Pilliods, I know you don’t agree with that right now, but just say there was, would that
14 become a substantial factor over Roundup? THE WITNESS: It would depend on what it was.”).
15 This inconsistency fails any test of reliability. *See, e.g., Soldo v. Sandoz Pharm. Corp.*, 244 F. Supp. 2d
16 434, 561 (W.D. Pa. 2003) (“consistency is a hallmark of the scientific method”).

17 Dr. Nabhan’s preoccupation with confounding factors also fluctuates according to risk factor. He
18 dismissed a study revealing that ██████████ doubled NHL risk by asking, “Was this adjusted to other
19 confounding factors?” Ex. 1, Nabhan *Pilliod* Dep. at 325:22–326:9. Yet he relied principally on the
20 McDuffie and Eriksson studies, which did not adjust for other pesticides. He also dismissed the ██████
21 ██████ findings in Nugent 2005 by claiming it “doesn’t look at other facts” like sun exposure. *Id.* at
22 181:11–23. But he does not rule out Roundup because McDuffie and Eriksson do not “look at other
23 facts,” like use of other pesticides. Either confounding factors invalidate the study’s results, or they do
24 not; *Sargon* does not allow an expert to have it both ways.

25 Similarly, Dr. Nabhan refuses to rule out Roundup even though there are no studies that
26 associate use with the Pilliods’ specific subtypes of NHL. *Id.* at 290:25–291:5 (can point to no
27 published article or statement “that says it’s generally accepted that exposure to formulated glyphosate
28 or Roundup causes DLBCL in particular.”). But when confronted with a finding that ██████████

1 increased the risk of NHL, he rejected it because it only showed an increased odds ratio for T-cell
2 lymphoma, but not other subtypes, “which are the ones that Mr. and Mrs. Pilliod have.” *Id.* at 359:21–
3 360:17. Dr. Weisenburger likewise differentiates subtypes when it is convenient, admitting that “if you
4 have the data on the subtypes, you should look at whether it’s a risk factor for that particular subtype,
5 rather than just NHL overall.” Ex. 3, Weisenburger *Pilliod* Dep. at 200:25–201:6 (“Q. So, again, in
6 terms of whether . . . ██████████ . . . is a risk factor for non-Hodgkin’s lymphoma, if you have the data on
7 the subtypes, you should look at whether it’s a risk factor for that particular subtype, rather than just
8 NHL overall? . . . THE WITNESS: Yes.”) In other words, it is scientifically appropriate to focus on
9 NHL subtypes to rule out ██████████ but not to rule out Roundup.

10 Likewise, the experts adjust the importance of “inconclusive” studies to suit their ends. Dr.
11 Nabhan excludes ██████████ as an alternative cause because he claims that the data is inconclusive. *See,*
12 *e.g.*, Ex. 1, Nabhan *Pilliod* Dep. at 316:10–16. In respect to data linking ██████████ and NHL, Dr.
13 Nabhan responded: “we just agreed we have to look at the totality of evidence, not at one paper or
14 another.” *Id.* at 349:3–5. But that is exactly what he does for Roundup: look at some papers that
15 support his always-Roundup theory and ignore all the others. Dr. Weisenburger likewise dismisses the
16 link between ██████████ and NHL based on its inconclusive nature. Ex. 3, Weisenburger *Pilliod* Dep. at
17 197:16–198:2. But his standard for conclusiveness is subjective. Regarding glyphosate evidence, he
18 says: “I draw conclusions from it, so I would say *for me* it’s conclusive.” *Id.* at 241:6–13 (emphasis
19 added). He adheres to his pre-conceived conclusion despite acknowledging the absence of “any
20 published literature article that says it’s generally accepted that exposure to formulated glyphosate
21 causes DLBCL.” *Id.* at 174:16–21. But as the MDL court meticulously documented in its general
22 causation *Daubert* ruling, the epidemiology connecting Roundup and NHL is also “rather weak.” *See In*
23 *re Roundup*, 2018 WL 3368534, at *1. Evenhandedly applying the “clear,” “conclusive,” or “definitive”
24 standard these experts adopt to exclude the other risk factors would necessarily mean that they would
25 have to rule out Roundup as well. The experts’ failure to objectively carry out their methodology in
26 both directions signals a hallmark of unreliability.

27 CONCLUSION

28 The Court should exclude the specific cause opinions of Dr. Nabhan and Dr. Weisenburger.

1 Executed this 12th day of February 2019.

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